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(54) Parietaria allergens

(57) Screening of a Parietaria pollen-λgt22 library with antisera to a 14-kDa pollen protein from Parietaria led to the identification of several cDNA clones encoding allergenic proteins. Nucleotide sequence analysis of these clones indicated that, on the basis of the sequence homologies, these clones may be classified to three groups; group I (PJ001) comprising seven isoallergens, group II (PJ002) comprising two isoallergens and group III (PJ003) with three isoallergenic variants. Four of these cDNAs were expressed in pCNAII vectors which bound to the murine antibodies. IgE binding assay with 15-residue peptides designed from the deduced sequences of one of the group I proteins revealed a dominant IgE-binding region which spanned two overlapping peptides, peptides #27 and #28. These peptides are conserved among all of the group I iso-allergens. Furthermore, a murine monoclonal antibody directed to a major Parietaria- allergen bound to peptide #28, suggesting that this peptide is recognized by mouse antibodies as well. In a splenocyte culture of mice immunized with Parietaria allergens, peptide #28 stimulated the production cytokines IL-2, IL-4 and IFN-γ, whereas, peptide #23 stimulated production of only cytokine IFN-γ. Furthermore, Parietaria-specific antibodies were found in sera of North American subjects and these antibodies were shown to bind the 14 kDa Par j I allergen. Accordingly, these recombinant Parietaria allergens are useful in both diagnosis and therapy of allergic diseases induced by Parietaria pollens.

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EUROPEAN SEARCH REPORT

Application Number
EP 95 40 1754

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X,D	COSTA M.A. ET AL.: "cDNA cloning, expression and primary structure of Par J I, a major allergen of Parietaria judaica pollen." FEBS LETTERS, vol. 341, no. 2,3, 1994, AMSTERDAM, NL, pages 182-186, XP002049655 * abstract * * page 182, paragraph bridging columns 1 and 2 * * page 184, column 2, paragraph 3 *	1-3,9,19	C12N15/29 C07K14/415 A61K39/36 C07K16/16
Y		4-8,11, 13-15	
Y		16,17	
Y		18	

Y	CA 2 066 801 A (MOHAPATRA SHYAM S ;HILL ROBERT D (CA); KISIL FRED T (CA); SEHON AL) * abstract * * claims 1-19 *	4-8,11, 13-15	
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Y	EP 0 080 806 A (RESEARCH CORP) * page 6 *	18	A61K C07K

X	RUFFILLI A. ET AL.: "A cDNA encoded dominant epitope of Parietaria major pollen allergen." ALLERGIE ET IMMUNOLOGIE, vol. 24, no. 2, 1992, PARIS, FR. page 52 XP002049656 * the whole document *	10	

Y	US 3 903 067 A (MULLAN NOEL AUSTIN ET AL) * column 8, line 1 - line 20 *	16,17	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	15 December 1997	Lejeune, R

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
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T : theory or principle underlying the invention
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